HARVEY / 3

Circumstances in the Life and Times of William Harvey

being

THE HARVEIAN ORATION

delivered before the Royal College of Physicians of London on St. Luke's Day 1929

by

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C.B., M.D., HON. M.D., T.C.D., F.R.C.P.
Consulting Physician to St. Bartholomew's Hospital

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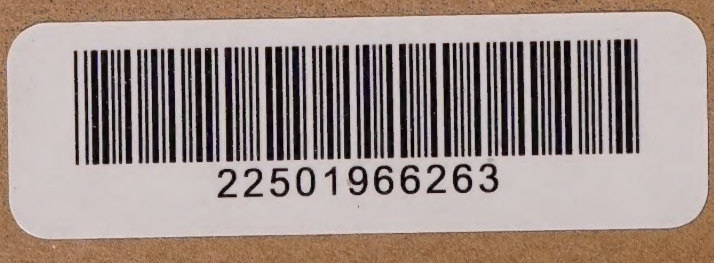
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CIRCUMSTANCES IN THE LIFE AND TIMES OF WILLIAM HARVEY

HARVEY seems to have had an unusual capacity for slipping through the world unnoticed. In our day a discovery like his would be reported in all the newspapers, but it seems then to have interested no one but his own profession. No private letters or memoirs of the time mention his name in this connexion, and it is only by a few casual notices of his practice in private or at court that we hear of him at all. We turn naturally to his own writings.

Of Harvey's Discourses you have heard enough. They shed a certain light on his character, but hardly any on the events of his life. Such as it is, all is well known to you already.

From private letters we expect more. But of the few of Harvey's letters which are preserved, several refer merely to anatomy and add nothing we did not know. One, that to Dorchester, better known as Sir Dudley Carleton, shows that, though Harvey is said to have been careless in business (which I do not believe), he at any rate took care not to lose a good position when he had got it.

Lastly there remain the letters to Lord Feilding, later the Earl of Denbigh, and a rather incompetent Parliamentary General. They are very amusing, for they show Harvey in a new character as the first of the long line of discontented British tourists. He is perfectly true to the type.

He is detained in quarantine at Treviso, and he is furious with the wooden stupidity of the officials who will not let him through, he is furious at the quarters in which they have housed him, and he is more furious still at their daring so to molest an English gentleman of no small importance, travelling on business for the King.

The chief passages in Harvey's life are well known. They have been collected by Sir D'Arcy Power, and Sir Thomas Barlow added an account of his University years.

I may, however, give you a few which I do not remember to have seen mentioned by them.

In 1625 he attended James I in his last illness. A year later he was examined before a Select Committee of the House of Commons which was drawing up articles of accusation against Buckingham to be laid before the Lords. The popular belief was that Buckingham had poisoned the old king to set Charles on the throne. This Harvey's evidence disproved. He showed that James, who 'undervalued his physicians', had insisted on trying the posset and the plaster which Buckingham recommended. The charge was therefore modified to one of 'transcendent presumption'.

He was one of a committee of the College of Physicians which, in 1627, reported on some alum works in the parish of St. Botolph at Aldgate and condemned them as a nuisance.

In 1633, on 23 June, when he was with King Charles for the coronation in Holyrood, he received the freedom of Edinburgh and was made a Guild brother at the banquet given to the King by the City. The Town Clerk who kindly gave me this information thinks that the honour was paid merely on account of Harvey's official position.

In 1641 he went to Aberdeen, and on 28 August received the freedom of that city also. Dr. Clark Souter, who showed me the entry in the Burgess Roll, has a very interesting explanation of Harvey's mission which I hope he will shortly publish. This was the year in which Charles tried unsuccessfully to raise a Scotch force against Parliament. It was not, I think, known before that Harvey accompanied him on this occasion, as well as in 1639 and 1640.

In 1645 the King sent the Duke of Richmond and Lennox and the Earl of Southampton from Oxford as Commissioners to treat for peace at Uxbridge with the Parliament. Harvey went in the suite of the Duke of Richmond and Lennox, with whom he had travelled in France fourteen years before, and his friend Edmund

Smith went thither also in the suite of the Earl of Southampton.

In November 1646 he was given a pass by Parliament from Oxford to Newcastle to attend the King as his physician. But he did not follow the King to Holmby House, nor do we find that he was ever again in attendance. Charles in September 1648 asked that Dr. Harvey or Dr. Wetherborne, his physicians, and Humphrey Painter, his surgeon, might be sent to him at Newport, but the request was apparently refused and two other men were sent.

In 1650 Harvey was given a pass to go to London to attend his old patient, Lady Thynne. She had to guarantee that he would take no steps prejudicial to the Commonwealth, but that was merely the usual precaution observed with any one who had been with the late king.

David Lloyd, in his Memorials of certain persons who suffered during the Rebellion, published in 1668, states that Harvey was fined £2,000 by Parliament.

¶ *The Family.*

Harvey's next brother, John, described on his admission to Gray's Inn in 1625 as Sergeant, or head of one of the Departments in the Household, became, on his resignation, Receiver of Crown Lands in Lincolnshire, and died in 1645 Member for Sandwich. His executor was the younger Harbottle Grimston, one of the most respected of the Parliamentary party.

It remains doubtful what his position in the Household was. His name does not occur in the Household accounts during James's reign. But they are concerned only with the spending departments, such as the cellar, kitchen, and bakery, and if, as Sir D'Arcy suggests, he was what we call an equerry, the omission would be explained.

The five remaining brothers, Thomas, Daniel, Eliab, Michael, and Matthew, were all in trade. Two of them, and apparently only two, were in the Grocers' Company.

Daniel was elected in 1611, when he was only 24, and was given a loan of £50 out of a benevolent fund founded by the Company to start young members in trade, and Eliab was elected in 1616. Both held office, and Daniel in 1639 and 1640 was elected Sheriff and Warden, but paid the fine to escape service. The Clerk to the Company has been good enough to search the books and tells me that there is no mention of the other three.

Foreign trade was then in the hands of chartered companies. The chief exports were cloth (a trade as old as Charlemagne, who wrote a letter to Offa complaining that the cloaks from Britain were shorter than they used to be), lead, and tin.

The oldest was the Merchant Adventurers Company, which had the monopoly of the trade with the north coast of Europe from the Elbe to the Scheldt. The Company's books are lost and we cannot therefore tell if the Harveys were in it. But there was a smaller company of Merchant Adventurers trading with France, of which Daniel and Matthew were certainly members.

In 1627 Charles, in one of the vagaries of his senseless foreign policy, confiscated some French ships. The French retaliated by confiscating British goods in France. This led to litigation, and Daniel and Matthew were accused before the Privy Council by their fellow Adventurers of acting in collusion with the French merchants. The matter seems to have dropped, as no subsequent proceedings are recorded in the register of the Council.

The other two great companies were the Levant Company and the East India Company. The Harveys were in both.

It seems to have been a family characteristic to refuse to pay entrance fees. In 1616 Thomas and Daniel, partners and 'Farmers of the pre-emption of Tynne', were admitted to the Levant Company. The patent for tin had been granted to Thomas the year before. Thomas paid his 'fine', as it was called, of £25, and this admitted the firm. Daniel was abroad. But when Thomas died in 1623, aged 38, Daniel,

by the rules of the Company, became liable for a fine. Nothing would induce him to pay it, and the Company did not get it out of him till December 1625, after he had been excluded from all trade inward and outward. Eliab and Michael did not join till 1637, when the fine was £50. They also applied for abatement. The petition was refused, but six months later Daniel joined the Board, and the petition now renewed was granted.

They repeated the process in the East India Company. Daniel was already a member in 1624. Eliab, Michael, and Matthew were elected in 1628 in order to join in an adventure to Persia instigated by Sir Robert Shirley, one of three adventurous brothers, who was chief adviser to Shah Abbas.

On the day when they were proposed they were elected in their absence and 'the fine was left to their discretion, though it was considered that they could not give less than £10 to the poor-box'.

They not only could but did. At the next meeting 'they took the accustomed oath, the Court expecting from them some reasonable fine in that respect, but they presenting to the Court but £6, which, howbeit, they refused not, yet they wished that Daniel Harvey would acquaint his brothers that the Court expected they would have enlarged themselves in a more bountiful manner, for the favour conferred upon them is not usually permitted to any under £20 a man.'

In 1633 there is recorded an amusing bit of sharp practice by Daniel. When a ship came home the members bid for the cargo at so many months' purchase. The usual rate of interest was then 7 per cent., but Daniel moved that the Treasurer should be ordered to receive such moneys as he should bring in upon discount for pepper at 8 per cent., on the grounds that it was much better for the Company to receive its own money at 8 per cent. than to borrow outside at 7 per cent. The Treasurer, however, took a different view and threatened to resign. It is not surprising to find that the Company supported him.

Clarendon, in his *Life*, states that Daniel had the reputation of knowing more about trade than any man in England, and that Archbishop Laud when he was made Commissioner of the Treasury in 1636, on the death of Weston, consulted him frequently. They were near neighbours, as the Archbishop had a house at Croydon and Daniel lived at Combe near by.

In 1641 Daniel and Eliab formed part of a deputation from the City which requested that the command of the City Militia should be restored to the Mayor and Common Council. They were severely snubbed.

It is evident that it was difficult to get money out of the Harveys, but they met their match in the Parliamentary Commissioners.

When the Civil War broke out both Parliament and the King found themselves in great straits for money. Both, at first, raised it by voluntary contributions, and the King never had much from any other source. Parliament, very early, began to exact contributions, and their first essay was by the methods in vogue in former reigns. The levy of one-twentieth was ordered on all goods and movables, in other words a 5 per cent. capital levy on personal property.

Under this Daniel Harvey was assessed in Dowgate ward. In April 1643 he was ordered to pay £1,500, but in November this was raised to £5,000. The money was extracted from him with great difficulty. His goods were distrained; in May 1644 he was imprisoned at Lambeth House, and in August they threatened to deport him to Plymouth. By 20 December he had paid £3,000. In February 1645 he is ordered to pay £500 more within a fortnight, and in July he was brought up before the Commissioners to answer objections against him. In 1650 he died, and in 1652, Eliab, his executor, made an affidavit that he had paid £4,000, whereas his rightful share was only £1,360, and his estate was thereupon credited with £3,000 on the Public Faith, corresponding to our Funds.

Eliab was assessed at £2,500. He absconded for a time.

His goods at Roehampton were distrained, but were bought up by Colonel Francis West, probably his brother-in-law, and the man who was afterwards Lieutenant of the Tower for Parliament. His servants refused to give evidence as to his whereabouts and were imprisoned. Eventually he was brought up in custody and forced to pay. The brothers were not alone. Many citizens behaved, and were dealt with, in the same way.

Later, Parliament raised money by assessment on counties, also an old method, and great difficulty was always experienced in collecting it. The continual arrears in pay were what gave the Army its power, as it refused to be disbanded unless payment was made, and no money was available for the purpose.

But the Harveys did not confine their operations to pepper and currants. In later life they dealt largely in land.

There seems to be no evidence that they were guided by their father in this. He had died in 1623, and Thomas, who died the same year, left no land. The first deal in land that we know of was in 1639, when the brothers lent Sir Kenelm Digby £10,000 on mortgage of his estates in Leicestershire and Rutland. Daniel must have been the real mortgagee, for he is described as of Tilton, one of the Digby manors, and was even nominated as Sheriff for Rutland, but, an objection being raised in the House, was not appointed.

At the end of the war land was easy to buy. All the Royal lands, all the Episcopal lands, and all the Cathedral lands were up for sale. Parliament also dealt very hardly with the Royalists and only admitted them to composition for their property under heavy fines. A man with a rent roll of £1,000 was usually fined £2,000. As he had already spent all he had, and melted his plate for the King, and as there were then no other ways of investing money than in land, he could not pay his fine without selling some of his property. To sharp business men like the Harveys it was a great opportunity.

By the end of the first generation, therefore, the Har-

veys, including William, had become large landowners. Matthew, who died in 1642, owned land in Kent and Surrey, Michael's sons had a Dorsetshire estate worth £21,000, Daniel had Combe and property in the Midlands, in Suffolk, and elsewhere, and left his widow £1,200 a year, and Eliab had Roehampton, Chigwell, Hempstead, and Langford, and houses in Broad Street, and left £1,500 a year to his widow. The brothers appear to have acted like a family firm. In commerce Daniel is described as the bidder, the others as his securities. In land purchase Eliab's name is more often used. William says that he bought Oxon and Baron Parke 'in the name of several persons nominated and trusted by me'. Eliab, to whom he left them, says that he himself bought them in his own and friends' names. Daniel writes of land in Kent and in Suffolk purchased 'in my own name and in the name of some of my brethren'. Eliab purchased land in Essex 'in my own name and in the name of John Prestwood and Henry Pratt', and other lands in the name of John Prestwood and John Styles. It was Eliab who bought the Dorset property which Michael's sons owned. Aubrey's statement that William left all his affairs in the hands of Eliab is probably founded on what seems then to have been a custom, buying in the names of third parties. In his dealings with the Hospital and the College William acted like a good man of business.

Only two of the branches lasted long. William, John, and Matthew had no children. The Michael branch died out in 1712. Thomas's only son, known as John Harvey of Antwerp, I have hitherto been unable to trace.

Young Daniel married into the Montagu family which took a leading part in bringing back Charles II. He obtained either as dowry with his wife, or by purchase from her father, who had bought it some years before, Combe Neville, an estate adjoining Richmond Park.

They had been strong Parliament men. Manchester, the Parliamentary General, and Sir Edward Montagu, the Parliamentary Admiral, were cousins. But they had become

disgusted with the state of things, and now intrigued for the exiled king. Sir Edward, Pepys's patron, commanded the fleet that brought him back.

Daniel was thus in the centre of the Royalist plot. He was a Member of the Convention Parliament which voted the Restoration and was made Commissioner of the Militia for Surrey. It is not therefore surprising that he and his cousin young Eliab, who also had married into a Royalist family, were knighted on the first day that Charles landed in England. He then obtained a grant of arms—the entry in the records of the Herald's College, which I saw by the courtesy of Lancaster Herald, has a note 'not before May 27 1660' appended—but as appears from the 4th edition of Guillim's *Display* the family had already assumed the arms. The practice was as common then as now.

He was a courtier, was made Keeper of Richmond Park, and fought under Albemarle in the sea-fight of 1666 against the Dutch. He appears that year as a friend of the notorious Castlemaines. Lady Castlemaine, the most beautiful and the most shameless of Charles's mistresses, quarrelled with him over a baby, Charles swearing it was not his, and she swearing that, whether it was his or not, he should own it. She left Whitehall in a rage, and took up her residence with the Harveys, where the King made it up with her. But two years later the ladies quarrelled over an actress who took off Lady Harvey on the stage and was protected by Lady Castlemaine. It did not interrupt the friendship of the husbands, for when Daniel sailed in 1668 to Constantinople as Ambassador Lord Castlemaine went with him for the trip. Daniel died there in 1672.

His son, Edward of Combe Neville, wasted his fortune. He was a Jacobite; was implicated in the rising of 1715, but was bailed out by his cousins and died at Dunkirk in 1730. In 1750 Edward's surviving son sold the property. Sir Daniel's sisters married well. Elizabeth married Heneage Finch, an honest man and an excellent lawyer,

who became Lord Chancellor and Earl of Nottingham. Mary married Sir Edward Dering of Surrenden Dering, and Sarah married an Irish peer, Lord Bulkeley.

Young Eliab remained in business, and in 1672 was proposed, though not elected, for Governor of the Levant Company. He had a great house in Broad Street which just escaped the Great Fire, and was made Keeper of the King's game in Epping Forest, where one of his properties, Chigwell, was.

He was succeeded by a long line of Williams and Eliabs, who were country gentlemen and M.P.s—in the Parliament of 1678 there were no less than four members of the family—with occasional soldiers.

The last of the line was a distinguished sailor, Sir Eliab, who, succeeding when a midshipman, by the death of an elder brother in 1779, nearly lost the property at the gaming table. He commanded the *Temeraire* at Trafalgar, and in 1809 was cashiered for insulting his admiral, Lord Gambier, who had promoted Cochran over his head. He was restored, however, the following year and died in 1830, G.C.B. and Admiral of the Blue. He left no son and, through one of his daughters, Rolls Park at Chigwell descended to the late Sir Francis Lloyd, whose widow still lives there.

¶ *School and University.*

Let us now consider some of the circumstances of Harvey's own life. He was brought up at the Cathedral School of Canterbury, one of the best in the country. At that date Latin was the universal language. It was the language of learned men, the language of diplomacy and of travel. Every Bachelor of Divinity had to preach in Latin; the young barristers used it in their moots in the Inns of Court; the Accounts of the Royal Household and even some of the merchants accounts were kept in it. Accordingly it was the aim of every good school to make its boys able not only to read, but also to speak Latin, and in the Statutes

of Canterbury, dated 1541, it is ordered that the boys of the three upper forms, whether at work or play, should speak nothing but Latin and Greek. But hardly any one then could teach Greek. You may remember that Montaigne, who lived about that time, was not allowed to speak any language but Latin until he was six. The rule was not uncommon in schools and colleges.

Greek was brought into the schools by the Calvinists who returned to England on the accession of Elizabeth. For them Greek and Hebrew were the two sacred languages, and for the study of the Bible Greek became common in the schools and even Hebrew was sometimes taught.

We may therefore confidently suppose that Harvey went to Cambridge able not only to read, but also to speak Latin after a fashion, and with some knowledge of Greek.

The old free University of the Middle Ages had given place to a system of Colleges and Halls founded to train priests by pious benefactors, of whom the greatest, though not the first, was my own founder William of Wykeham. The life was hard and the teaching narrow.

Into these ecclesiastical seminaries the classic revival of the fifteenth century in Italy, patronized by Humphrey, Duke of Gloucester, and other great men, brought a fresh inspiration. At Oxford Linacre and Grocyn were teaching Greek. Wolsey and Fox and Henry VIII all encouraged and endowed classical studies.

But the Classics, and especially Greek, were attacked for their paganism both by the old religion and the new. In Oxford, Greek soon fell into disfavour. At Cambridge, under Cheke and Smith, it held better. By Harvey's time it was re-established. Spenser, who went up in 1570, was reputed a Platonist, and Harvey was devoted to Aristotle. He uses Greek words correctly, and his translations seem to be from the original.

But meanwhile the Universities had fallen on evil times.

The Church had been plundered by the Crown and also by its own patrons, both lay and ecclesiastic.

Spenser, in 'Mother Hubberd's Tale', describes the lay patron bargaining with an unfortunate clergyman, before he would present him to a £40 living, that he should resign half the income to the squire's son.

The case of Wokingham was reported to the Long Parliament. It was in the gift of Salisbury. The Dean and Chapter had leased the rectory and tithes to a layman, there was no vicarage, and the parishioners had, for many years, had to pay a preacher out of their own pockets.

The upper clergy were Pluralists. One man might hold several benefices. Bancroft defends this on the ground that one benefice was not enough for a man to live on, and that many laymen owned the tithes of more than one parish.

The lower clergy were accordingly half-starved, and as a natural consequence were grossly ignorant, careless of their duties, and sometimes drunken and corrupt. 'Scandalous benefices beget scandalous ministers', as Heylyn remarks. When Laud was Archbishop he found that there were only two incumbents in the diocese of Bangor who could preach a sermon. It was this state of things that gave the Calvinist attack such strength. The Church fell as much by its own faults as by the virtues of its foes.

The absence of decent prospects in the ministry led to a great falling off in the number of undergraduates, the great majority of whom were divinity students. Added to this, the destruction of the monasteries had deprived the Universities of the large number of scholars whom the monks sent up with exhibitions.

In the middle of the sixteenth century the numbers had fallen to a few hundreds, nearly all the Halls were closed, and the Colleges were half empty.

Further, the ecclesiastical character of the Universities laid them open to interference by the Head of the Church, now the monarch.

By voting for the divorce they had placated Henry VIII. But under Edward VI all the Heads and Professors who

sympathized with the old religion were expelled. Under Mary the process was renewed in the opposite direction. Eleven Heads were expelled in Cambridge alone. Under Elizabeth the Act of Supremacy was enforced with a similar expulsion of Romanists, and the Universities became violently Calvinist.

In 1573 the Vice-Chancellor of Cambridge and the Heads of Trinity and King's broke into Caius Chapel and destroyed all the decorations with which Caius, who was a High Churchman, if not a Papist, had beautified it.

The Anglican Church too had become strongly Calvinist.

In 1595 Whitgift, the Archbishop of Canterbury, and a synod of bishops drew up the Lambeth Articles, of which the following are specimens:

1. God, from all Eternity, hath predestined certain men unto life: certain men He hath reprobated.
2. The moving cause of Predestination unto Life is not Faith or Good Works or 'anything that is in the person predestinated', but only the Goodwill and Pleasure of God.
3. There is predetermined a certain number of the Predestinate, which can neither be augmented nor diminished.
4. Those who are not predestinated to salvation shall be necessarily damned for their sins.

* * * *

7. Saving Grace is not given . . . to all men by which they may be saved if they will.
8. No man can come unto Christ unless the Father shall draw him; and all men are not drawn by the Father.
9. It is not in the will or power of every one to be saved.

This cheerful view of the future was, however, too much for Elizabeth. She sent for her little black husband, as she called Whitgift, and, after giving him what, in those days, was called a rattling, told him to withdraw the Articles altogether, which he had to do.

James, who loathed the Scotch Calvinists, threw all his weight on the same side.

In 1611 Laud, who, in spite of the violent opposition of the two Abbots, George the Archbishop and Robert, Master of Balliol, had led a growing High Church party in Oxford, was elected President of St. John's, and by 1622 Oxford had become anti-Calvinist. When Laud became Archbishop he compelled Cambridge to follow suit.

Meanwhile, however, a great change had taken place in the material circumstances of the Universities. Elizabeth, who loved to air her accomplishments, began the system of Royal visits to the Universities, with all their solemn puerilities, which was continued by James and Charles.

She made the Universities fashionable. Donations were made by her courtiers, and the numbers rose, at the end of her reign, to 2,500 at Oxford and nearly as many at Cambridge. Venn says that 1590 to 1640 was the zenith of the Universities until quite recent times.

The result, though it made the Universities representative of all classes of the nation, was not an unmixed blessing. The rich youth, who now flocked in, brought with them the manners of rich men, and for many years the statute books are full of decrees against extravagances in dress, drunkenness, gambling, insubordination, and such unseemly sports as football. An undergraduate twice convicted was to be whipped. Simonds D'Ewes, a virtuous little Puritan who went up in 1618, complains much of the habits of the undergraduates. They were probably much the same as they are now.

All this had, however, little effect upon the poorer students. Harvey went to Caius with a Matthew Parker scholarship, the capital endowment of which was £61 13*s.* 4*d.*, and the income £3 0*s.* 8*d.*

Elizabeth in 1559 made an injunction that all clergy whose benefices were worth £100 or more should, for every £100 of their income, contribute £3 6*s.* 8*d.* as an exhibition for a scholar at the Universities.

Under James existing Professorships received additional revenue, among which the Chair of Physic at Oxford was augmented by the Mastership of Ewelme Hospital, and fresh chairs were set up in Mathematics, in Natural and in Moral Philosophy, and in Anatomy. All these at Oxford. Similar improvements, no doubt, took place at Cambridge.

During the Rebellion both Universities were Royalist, though Cambridge was quickly mastered by Cromwell. After the King's death Oxford refused to take the oath prescribed by Parliament and was punished by a visitation under Philip, Earl of Montgomery and Pembroke, the Chancellor who succeeded Hertford, appointed by Charles on Laud's execution. On his death in 1650 Cromwell became Chancellor, and under his more tolerant rule Oxford had comparative rest.

Of Harvey's feeling to Cambridge we know nothing. He is not known to have returned there after taking his degree, though, as he was at Newmarket in 1636 attending the young Elector, it is possible he was present at some ceremony.

¶ *The Sciences.*

To understand the England of Harvey we must imagine a Society to which Science was unknown. To us the growth of knowledge by observation and experiment is a commonplace. Every morning we read the discussions of some scientific conference or are informed of a new discovery. In Harvey's time the few sciences that existed were little removed from magic, and the great majority, including all the biological sciences from Botany to Sociology, except Anatomy, did not exist at all. Alone in the great mind of Bacon had the real meaning of Science been grasped, and the immensity of its future conceived. Men still ascribed the action of the brain and liver to spirits, and the causes of disease to disordered humours. Not only had they not yet comprehended that such operations could be examined

by physical methods, but they resented as heresy little less than criminal all attempts to correct the mistakes and supplement the deficiencies of great predecessors such as Galen, which would have been welcomed by no one more warmly than by Galen himself.

¶ *Medicine.*

Chaucer does not give a very good character to his Doctour of Physicke.

> In all the world ne was ther non him lyk
> To speak of physik and of surgerye
> For he was grounded in astronomye.

and therefore could tell his patients' prospects by the stars.

> He knew the cause of every maladye
> Were it of cold or hete or moist or drye
> And where they engendrid, and of what humour;
> He was a very parfight practisour:

Then he describes his understanding with his apothecaries.

> For eche of hem made other for to wynne
> Here friendship was not newe to beginne.

Then he describes a list of the old authors that he knew, and goes on to describe his rich dress.

> And yit he was not esy in dispence,
> He kepte that he won in pestilence,
> For gold in phisik is a cordial
> Therefore he lovede gold in special.

Bacon, in his *Advancement of Learning*, published in 1604, the year that Harvey took his degree, describes with great shrewdness the difficulties of medical practice. He says that a physician must not be judged by results, as we judge other professions, because his material is so obscure, and his patients so different in constitution, and sums up:

'So then the subject being so variable hath made the art by con-

sequence more conjectural, and the art being conjectural hath made so much the more place to be left for imposture.'

* * * * * *

'And therefore I cannot much blame physicians that they use commonly to intend some other art or practice which they fancy more than their profession. For you shall have of them antiquaries, poets, humanists, statesmen, merchants, divines, and in every of these better seen than in their profession; and no doubt upon this ground, that they find mediocrity and excellence in their art maketh no difference in profit or reputation towards their fortunes.'

* * * * * *

'Medicine is a science which hath been, as we said, more professed than laboured, and yet more laboured than advanced,'

and the reasons that he gives are 'the discontinuance of the ancient and serious diligence of Hippocrates' in taking notes of cases, the neglect of Morbid Anatomy, and the absence of exact inquiry into the effect of drugs.

In Bacon's own lifetime two men, Mayerne and Harvey, partly, we may think, owing to Bacon's criticism, and partly, no doubt, because they shared in the scientific spirit that was just beginning to awake, worked exactly as Bacon advised. We have Mayerne's clinical and post-mortem notes in his own beautiful handwriting here in the Library. Harvey's, which he promises to publish, are unfortunately lost, but he had them in 1648 when the letters to Riolan were written. These two men revived the old Hippocratic tradition, and they were followed, after the Restoration, by Willis, Lower, Glisson, and Sydenham.

It is difficult to form an accurate estimate of Harvey's position either at Court or in public estimation. No less than sixteen men besides Harvey had the title of Medicus Regius under James and Charles, and five of them were knighted, which Harvey never was. He seems to have been not a Physician in Ordinary in our sense, by which we mean a consultant, but the regular resident attendant of the King and Court, practising Medicine, Surgery, and Gynaecology. The story that his prescriptions were little valued

probably means that he had a healthy scepticism of the value of the long prescriptions commonly used.

He must have had a good practice, for he left a large sum of money and he had some eminent patients. In 1616 the Dowager Countess of Arundel wrote to the Earl telling him of the dangerous illness of his son, who was under her charge in Surrey, and begging him to send the best physician he could get. He sent Harvey, so that their acquaintance dated at least from that time. Harvey attended Bacon when Lord Chancellor, and also Bacon's successor, Lord Keeper Williams, whose biographer, Hacket, says that in 1624 the Lord Keeper was saved from death, apparently in enteric fever, by 'the great Secretary of Nature Dr. William Harvey'. He attended the Lord Treasurer Weston in 1633, and we know the names of other patients from the certificates he gave exempting them from having to leave London in the winter. Elizabeth, James, and Charles ordered country gentlemen to go to their estates for the winter to prevent them from spending all their time and money in town.

But undoubtedly the great man of the time was Sir Theodore Turquet de Mayerne. In 1644 the Queen, writing to him, signs herself 'votre bien bonne maistresse et amie', and Charles writes 'Mayerne, Pour l'amour de Dieu, allez trouver ma femme.'

On 19 May 1645 he was paid the greatest compliment that Parliament has ever, I suppose, paid to a medical man. The Lords sent down a message to the Commons:

> 'The Lords desire that the House of Commons would join with them in expressing their esteem of a man whose extraordinary abilities would make him welcome in any part of Christendom; and as he is singular for his knowledge in his profession, so he may be singular in being by the favour of the House exempted from all payments which others are subject unto: it being but a continuation of that favour which he hath enjoyed for about thirty years without interruption.'

The House of Commons agreed by sixty-nine to sixty-six. Mayerne died in 1650.

¶ *The other Sciences.*

The other Sciences in Harvey's time were as little advanced as Medicine. Chemistry was first studied seriously by Robert Boyle at the end of Harvey's life; Physics had produced in 1600 the book of Gilbert, President of the College that year, on the Lodestone, a work of the first class, of which parts are still standard. Napier had in 1614 invented logarithms. But the Science which advanced most rapidly in Harvey's life was Astronomy. Galileo was lecturing in Padua when he was there, Kepler died in 1630, and in 1637 a poor Lancashire clergyman named Horrocks with borrowed lenses observed for the first time the Transit of Venus. It has been questioned whether Harvey attended Galileo's lectures. As Galileo drew enormous audiences it is almost certain that he did, but if so they seem to have made but small impression, for his references to Astronomy are merely to disparage its methods in comparison with the direct observation of Anatomy.

There was, however, a good deal of amateur experiment and invention. Prince Rupert dabbled in Chemistry, the Marquis of Worcester had set up at Raglan Castle hydraulic machinery which frightened the Parliamentary Commissioners out of their wits, and Petty patented his first invention in 1647. There was also a small group of men who sought relief from the troubles of the times in the study of natural philosophy. They met in London up to 1648 and latterly at Gresham College, which Hobbes says had absorbed the natural sciences from the Universities, but as in that year it was used as a barracks they transferred their meetings to Oxford. Harvey was at Oxford when they met in London, and when they met at Oxford he had already left it. He never therefore formed one of the group which was the nucleus of the Royal Society. Even so, it is rather curious that Sprat's *History of the Royal Society* (published in 1667) makes no mention of Harvey as a precursor.

In striking contrast to the infantile condition of Science was the maturity of Art and Literature.

¶ *The Arts.*

In Harvey's time there was a great enthusiasm for Painting and Sculpture. Charles is said to have had the finest collection of pictures in Europe. Arundel was second only to the King. But they were not alone. Buckingham and many others were collectors, and it was not confined to Court circles. Colonel Hutchinson, the regicide, was a good judge and Mrs. Cromwell had a collection of portraits. Prince Rupert was an etcher.

There was no native school, though Dobson painted good portraits, and Cornelius Jansen was born in England and lived there till 1643, but the seventeenth century was the age of the Dutch, Flemish, and Spanish schools and collectors can seldom have had such chances. Vandyck lived for several years at different times in England, and married a lady of Scotch extraction who through Margaret Tudor had royal blood in her veins, and Rubens was sent over as ambassador. He wrote that England had the richest cultivation and the finest pictures he had ever seen.

Harvey was undoubtedly interested in painting, for Arundel gave him a commission to buy for the King in Italy, and when he escaped from quarantine he travelled to Florence and Rome under the guidance of Mr. Petty, a clergyman, who collected in Italy and the Near East for the Earl. By his introductions he was very courteously treated by the Grand Duke of Tuscany, who was a scientific man, and by Cardinal Barberini at Rome, but he was an amateur at buying and failed to get anything of value.

Another Art that was universally cultivated then was Music. From 1590 to 1640 English music is said to have been at its zenith. The Puritans stopped ecclesiastical music, but rather because it was favoured by the bishops than that they themselves objected to it. Milton had loved it in his youth. There was a good deal of destruction of

organs and church instruments at the hands of the soldiers. But it was not widespread, and the Puritans themselves sang Psalms.

Secular music was never thought wrong by any one, and it is quite untrue to say that the Puritans set their faces against it. Bunyan, Milton, Cromwell, and Colonel Hutchinson were all devoted to music, and Colonel Hutchinson to dancing also, yet no one was a stricter Puritan than he. Cromwell was the first man who provided a Court Concert as an entertainment for his friends. His Ambassador to Sweden, Whitelocke, took musicians with him, and was himself a performer. In fact, in those days it was a regular part of a gentleman's education, whatever his religion or his politics.

One of the best composers of song music was Henry Lawes, to whom Milton writes an ode, and he, in 1655, published a collection of Ayres, dedicated to Lady Dering, who composed three of the pieces in it. This is Harvey's niece Mary, Daniel Harvey's daughter. Mrs. Hutchinson also composed. In the ten years 1650 to 1659 there are thirty-four publications of musical works.

But of course nothing equals in significance the fact that Harvey's life was practically conterminous with what we term Elizabethan literature, the greatest outburst of literary genius that the world has ever seen. The first three books of *The Faerie Queene* were published when Harvey was 11 years old, and Herrick's *Hesperides* in 1648, when he was 70, and between those dates lie all the greatest names in English literature.

I have wondered whether, in their early married life, Dr. and Mrs. Harvey took a boat across to Bankside, where Shakespeare's plays were being given at the Globe up to 1613. I have wondered too what Harvey thought of the *Religio Medici*, which was circulating in manuscript in 1636, and what he would have said to Browne if they had met. We know Browne's opinion of the *De Motu*. In recommending it to Dr. Henry Power, he speaks of it as a greater discovery than that of Columbus.

Harvey quotes Terence and uses phrases from Virgil, whom he greatly admired, but he gives no sign that he had ever read or heard of the great writers of his own day.

But a writer on scientific subjects can hardly be expected to quote contemporary poetry. The 'In Memoriam' shows that Tennyson had read Darwin, but I do not remember that Darwin quotes Tennyson. It does not seem a habit of great men of science to quote poetry.

We need not, therefore, suppose that Harvey's silence means that he was without knowledge of the wonderful art around him; on the contrary, we know that he mixed with men who held it in the highest honour. Charles was devoted to the drama and according to Milton kept a Shakespeare in his bedroom.

But in the first half of the seventeenth century the interest of most men was turned, not to literature, nor to painting, nor to science, but to two subjects, which of all others are the most inimical to the cultivation of science or of art, Politics and Religion.

¶ *Politics.*

The chief social change in the sixteenth century was the rise in wealth and influence of the upper middle class, including the squires in the country and the merchants in the towns. Both were of the same stock, for younger sons went into trade, and merchants who succeeded bought land. Some families combined both. The Barnardistons were an old Suffolk family in 1600, and are there still. In Charles's reign they were also great merchants, members of the Levant Company and prominent members of the Long Parliament.

The squires profited by the ruin, in the Wars of the Roses, of the old nobility, whose estates they bought, and also by grants and cheap leases of the Abbey lands under Henry VIII, and both they and the merchants by the great growth of the cloth trade which began under Edward IV, increased under Henry, and continued with

fluctuations throughout the century. It led to a great demand for sheep pasture, and this in turn to a fourfold rise in rents, as related by Latimer, and to a large reduction of arable land to pasture as described in the *Utopia*. But this again threw so many labourers out of work that Elizabeth was obliged to pass a new Poor Law to save them from starvation.

The House of Commons was practically filled by the squires, the merchants, and the lawyers who sprang from both.

The Tudors, the ablest and the only native dynasty we have ever had, knew the House of Commons thoroughly, and, except in matters of religion, managed them with great tact. But Elizabeth, with all her prestige and popularity, so clearly recognized their reluctance to grant money, that she practised the most sordid parsimony, suffered her great public servants to die in poverty, and poisoned with bad victuals the soldiers and sailors who saved England sooner than ask for supplies. Even in her reign the Commons put forward new claims for freedom of speech and the regulation of elections, and there was a great deal of discontent over the Act of Uniformity.

James, coming as a foreigner from a country where the middle classes had no power, and ignorant of our great political struggles in past centuries, was as entirely unable to recognize the position of the Commons as he was personally incapable of dealing with them. His silly profusion brought him rapidly to poverty, and he presented the ironic spectacle of a king blustering about his sovereign power, and in the same breath begging for money to pay his tradesmen. No wonder that the Commons lost their loyalty to the Crown. In 1621 James tore out of the Commons' Journals the dignified Declaration in which they stated their Rights and Liberties, and in 1625 he died at the end of the negotiations for the Spanish match, an enterprise begun with the usual Stuart disregard of the national feeling, pursued with the usual Stuart duplicity, and ending in the usual Stuart ill success.

For Charles there was less excuse. He had taken a prominent part in politics for some years before his accession, and had abundant opportunity to learn. But if a man cannot learn by experience, wherewithal can he be instructed?

He was, in his first years, dominated by his evil genius, Buckingham, and though the Commons undoubtedly treated him very badly at that time, yet surely no man could have treated them with less tact than Charles. A Venetian wrote of him: 'This King is so framed by Constitution that he can never oblige any man by word or deed.'

When he finally decided to govern without Parliament, his arbitrary measures, if not against the letter of the law —and it must be remembered that he had the warrant of most of his judges for what he did—were so completely against the spirit both of the Constitution and of the Petition of Right which he had recently signed, that he irretrievably alienated both Parliament and the country.

But Charles could hardly have acted otherwise. The effect of the Parliamentary policy was not merely to reform grievances but nothing less than to transfer the supreme power from the Crown to the House of Commons alone. Such views, though familiar to us, had never till then been professed by any State in Europe. They were contrary to all the received political theories of the time, and Charles was justified in maintaining that they could be established by force alone.

In addition, neither party could rely on negotiation; for both the King and the Commons were equally justified in distrusting each other. If the Commons had good cause to distrust Charles, and they certainly had, Charles had equally good grounds to distrust them. Faction ran high; what was voted on Monday was rescinded on Tuesday, and at the end the majority who wished to continue negotiations with the King were expelled from the House by the minority and the Army.

In my young days small boys were occasionally puzzled

by the question, 'What happens when an irresistible force comes against an immovable post?' It not inaptly represents the positions of the Parliament and the King.

¶ *Religion.*

But the desire for political liberty had small influence compared to the violence of religious fanaticism. Religious grievances were invariably placed first in all the transactions of the House of Commons.

Henry VIII, to gratify his own passions, had led the nation to revolt from the Pope. But beyond a change of supremacy, the religious practice of England was, for many years, little altered.

Gradually, however, and more rapidly after the Marian persecution, Calvinism spread over the whole of England and Scotland. The City of London and the Universities were its chief strongholds.

It is difficult for us to understand its appeal.

Probably few Fellows of the College have laboured under the conviction of original sin and the certainty of damnation which clouded Cromwell's early manhood, or have experienced the assurance of saving grace which was his comfort and support in later life. But we can imagine how men, accustomed to the lax religion of the time, administered by an ignorant and careless clergy, for such though with some brilliant exceptions they were, must have been affected by the greatest revivalism that has ever taken place, to which Wycliffe, Wesley, and the Salvation Army are but as ripples on a pond to a storm in the ocean, and what, to men living under the formalism of Rome, must have seemed the splendour of Calvin's great announcement that the creature could commune directly with the Creator, that the individual soul could approach the Divinity, that there was no barrier between God and man.

Nor was it weakened by his terrible doctrine of Predestination. Men's minds are naturally fascinated by

horrors. Gloomy creeds have created the fiercest enthusiasm, and the Independents, the logical sons of Calvin, though he would have been the first to disown them, formed the most remarkable army that England has ever raised.

But if we find it hard to understand the acceptance of Calvinism, still harder is it to comprehend a society in which toleration was not only not approved, but was even abhorred as treachery to God. The Puritans were mocked as Saints, but they spoke of themselves by the same term, and it was not always undeserved. Some of them were as truly saints as any that ever existed. But even such men hated their opponents with a violence we can hardly believe, and had no thought of allowing them any kind of toleration. Calvinist, Arminian, Anglican, Independent, and Papist, each was convinced that his own opinion was the true, and each was determined that it should be enforced on every man, woman, and child in the country.

Posterity has undoubtedly approved the political aims of the Parliament and looks upon it rightly as the preserver of English liberty. We are, therefore, the more astonished to observe the complete dearth of constructive political ability which marks its members. They pulled down everything; they built nothing. The Presbyterians destroyed the Church; the Independents destroyed the Commons, the Lords, and the Monarchy; and they themselves, when they turned out the Rump and set up the Protectorate, were attacked by the Republicans and Fifth Monarchy men, who plotted the assassination of Cromwell.

Compare what Cromwell, honestly anxious to restore good government, could do for England in the years of his power, with the complete system of administration, religious, educational, judicial, municipal, and financial, which Napoleon established between 1800 and 1811; or if you like a modern instance, with the system of government established in Italy since the War. It may be that when Mussolini dies the edifice will fall, but see what force and what creative imagination he has displayed.

Cromwell had neither the insight of a statesman nor the force of a despot. Henry Cromwell, replying to the republicans in Ireland, spoke the mere truth when he said, 'You complain of my father's power, but they make the veriest kickshaw of him at London'.

The Government during those ten years is, in England, a long series of failures, and, in Ireland, one of the greatest political crimes on record.

Charles lost his cause, luckily for us. But in the personal struggle he was the victor. He had more foresight than any of them. He always believed that the Rebellion would break down and the monarchy be restored, if not in his time, then in his son's. Accordingly he resisted to the utmost, and, by so doing, forced his foes into such violent and illegal courses as completely lost them the sympathy of the nation. After his execution they never dared to summon a freely elected Parliament, they were driven to acts of greater and greater despotism, and when the prestige of Cromwell, waning even before his death, was removed, they perished by their own dissensions and by the universal detestation that their tyranny had evoked.

But if posterity has approved the political aims of the Long Parliament, it has condemned their religious purposes no less emphatically. The views which Laud held about the Anglican Church as a branch of the Church Catholic are those now held by its members, the clergy now are as Laud would have had them, and the services in every little parish are such as would have pleased Laud and would have roused Pym and Elliot to fury. But these are small matters.

The great vice of the age was its intolerance, and the religious mania, for we can call it nothing else, which overran England between 1560 and 1660 like an epidemic, did not even, like bodily epidemics, leave a population behind it immune to its particular poison. Never was religious hatred more bitter on both sides than after the Restoration: witness the expulsion of the ministers on the one hand, and the Popish Plot on the other, and in its graver

forms it persisted for over a century and a half. Catholic Emancipation was not carried till 1829, Oxford and Cambridge were not thrown open till 1871, and mutual respect and goodwill between the Free and the Established Churches is a growth of the last 30 or 40 years.

It has been claimed that the Puritans preserved the family life of England from the corruption and the licentiousness of Court manners. Such statements assume, on the one hand, that the Court society of the day was something exceptional, and, on the other, that the manners of the Capital were the manners of the country. Neither is true.

The fashionable London Society of that day, as of this, was composed of people in affluent circumstances, occupied chiefly with their own pleasures and their own selfish interests, with leisure and without, for the most part, serious occupation. Can you suppose that such a society could exist, have you ever known such a society to exist, either in London or any other capital, against which the accusation of vice and folly could not be brought? There was nothing exceptionally wicked in Society then. There were some scandals—the Somerset and the Purbeck stories, for instance—there were drunkards and profligates, there were family quarrels—when Lady Hatton asked James to dinner, he suggested it might be a good occasion to make up her quarrel with her second husband, Sir Edward Coke; she said if her husband came in at one door she would go out at the other. But in all these points was Society then very different from the present, and could we not from the Law Reports parallel every one of them over and over again at the present day?

Charles himself was even too uxorious, and at a time when old Lady Arundel and young Lady Derby, the defender of Lathom House, when the elder Lady Verney, whom her husband always called 'Good Puss', and the younger Lady Verney, whom the whole family nicknamed 'Mischief', when Mrs. Hutchinson and Lady Wandesford and Lady Fanshawe, and, above all, Dorothy

Osborne were alive, and when the stage was trodden by those exquisite types of English girlhood, whom we could match to-day, Portia, Rosalind and Celia, Beatrice, Imogen and Miranda, do you think that there can have been much amiss with the position of women? The more family memoirs and letters we read, the more we feel that the men and women of that time, and the children too, were very much the same as ourselves.

It is said, too, that to the Puritans we owe that sturdiness which has kept and increased the liberty they won. Neither is this to be accepted. Lived there no brave men before Agamemnon? Did not the men of that day expressly proclaim themselves followers in their fathers' footsteps, guardians of what they had obtained by peril of their lives?

The temper of a great nation is a thing too firmly set to change under every blast of new doctrine, and its history is the consequence of its character, not the cause of it.

The Puritans were the guardians of spiritual fervour at a season when religion had become cold and dead. Such seasons of decay occur from time to time, and the Puritans are neither the first nor the last of the Revivalists. Whenever need arises, such men have a great part cast for them on the world's theatre, and none of us should criticize them so harshly as to refuse them their due praise.

But we owe to them the loss of half the beauty of England. They destroyed the drama, they sold the finest collection of pictures in Europe, and even ordered the religious pictures to be burnt as superstitious; there is not a village church which does not bear the marks of their barbarous hands, and three several times it was proposed in Parliament to pull down the Cathedrals and sell the materials for what they would fetch.

But, after all, our interest is not to praise or blame the actors in this great tragedy. It is to consider what was Harvey's attitude to the great struggles, political and religious, that were taking place around him. And of this we obtain from himself no evidence whatever. He men-

tions the King and Queen two or three times in the *De Generatione*, but without any word of special affection or regret, which indeed in 1651 it might not have been prudent to print. He mentions Parliament once, complaining that as he was attending the King with their permission and even at their command they might have prevented the mob from destroying his collections. There remains only the message that he is said to have sent to Scarborough, who was an ardent Royalist, 'Leave thy gunning and come here and I will bring thee into practice.' But that may be significant.

We may well believe that he would not approve either the folly and tyranny of Charles, of which he must have known from his brothers, or the violence and malice of his foes. To Harvey the war must have seemed a vast catastrophe for which both parties were alike responsible, from which little good was likely to be gained, and which was destructive of the one thing he cared about, the advance of knowledge.

And for religion. Few men of serious character then doubted the fundamental beliefs of Christianity, and Harvey was of a reverent mind. But we cannot fancy him sympathizing either with Laud's extreme love of ceremony or with the brutal irreverence of the Puritans. Harvey's religious feelings, we may be sure, were too sincere and too deeply felt ever to be published to the world.

The story goes that Addison once asked Garth of what religion he was. Garth replied, 'Wise men all hold the same religion.' 'What is that?' said Addison, and Garth answered, 'Wise men never tell.'